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10/020,130	12/18/2001	Takashi Mochizuki	Q67762	7342

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EXAMINER

DEAN, RAYMOND S

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/020,130

Applicant(s)

MOCHIZUKI, TAKASHI

Examiner

Raymond S. Dean

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-10 and 18-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10 and 18-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 6, 18 – 19, 25 – 28 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the new limitations of Claim 1

Toskala teaches wherein the power of the base stations are controlled via closed loop power control regardless of the selected state (See Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2) thus Toskala further reads on the new limitations in amended Claim 1.

Regarding the new limitations to Claim 6

Mohebbi teaches determining an estimated uplink reception quality of said other base stations based on measuring, at the mobile terminal, transmission powers of each of the downlink signals from the other base stations (See Cols. 6 lines 63 – 67, 7 lines 1 – 2). Mohebbi also teaches the limitation of wherein the user data from the selected first base station is demodulated by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal such that the downlink signals from the other base stations are individually weighted based on the estimated uplink reception quality and combined with the downlink signal of the selected first base station while the first base station is selected as transmitting user data having the preferred reception quality (Cols. 1 lines

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44 – 53, 6 lines 63 – 67, 7 lines 1 – 2, the ranking is the weighting). Mohebbi thus reads on the new limitations of amended Claim 6.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 18, 25, 27, 29 – 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dabak (US 6,862,275) in view of Toskala et al. (US 6,650,905).

Regarding Claim 1, Dabak teaches a transmission power control method for controlling the transmission power of downlink signals from base stations to a mobile terminal in a mobile communication system, comprising the steps of: selecting, at the mobile terminal, a first base station, said first base station transmitting user data in a downlink signal with a preferred reception quality (Column 5 lines 50 – 67, Column 6 lines 1 – 11); determining, at the mobile terminal, transmission power of downlink signals from other base stations not selected by said mobile terminal, said other base stations transmitting user data in said downlink signals to the mobile terminal after the identification of the selected first base station is transmitted (Column 6 lines 2 – 7, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504;506) are the base stations that are not selected, said base stations will resume transmitting data symbols in the

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subsequent data frames, which are the frames after the base station (502) is selected); sending information, from the mobile terminal to the base station, to modify the transmission power of the downlink signals of the base station based on the determined transmission power of the downlink signals from said base station (Column 5 lines 32 – 49).

Dabak does not teach transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal, determining, at the mobile terminal, transmission power of downlink signals from the selected first base station and the other base stations not selected by said mobile terminal, sending information from the mobile terminal to the selected first base station and the other base stations, to modify the transmission power of the downlink signals of the base stations based on the determined transmission power of the downlink signals from said selected first base station and said other base stations not selected by said mobile terminal, wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations, wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission

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of user data, wherein the information sent from the mobile terminal to the selected first base station and the other base stations to modify the transmission power of the downlink signals of the selected first base station and the other base stations is transmitted while the first base station is selected as transmitting user data with the preferred reception quality.

Toskala teaches transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal (Column 10 lines 22 – 25). Toskala further teaches determining, at the mobile terminal, transmission power of downlink signals from the selected first base station and the other base stations not selected by said mobile terminal (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, the power of the base stations, regardless of the selected state, is measured for the purposes of closed loop power control). Toskala further teaches sending information, from the mobile terminal to the selected first base station and the other base stations, to modify the transmission power of the downlink signals of the selected first base station and the other base stations based on the determined transmission power of the downlink signals from said selected first base station and said other base stations not selected by said mobile terminal (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2). Toskala further teaches wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and

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said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations (Col. 10 lines 22 – 29, See Response To Arguments Above), wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data (Col. 10 lines 22 – 29, See Response To Arguments Above), wherein the information sent from the mobile terminal to the selected first base station and the other base stations to modify the transmission power of the downlink signals of the selected first base station and the other base stations is transmitted while the first base station is selected as transmitting user data with the preferred reception quality (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, the power of the base stations, regardless of the selected state, is controlled via closed loop power control).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the power control method taught by Toskala in the system of Dabak for the purpose of controlling transmission power in SSDT mode as taught by Toskala.

Regarding Claim 18, Dabak teaches a mobile terminal that controls transmission power of downlink signals from base stations in a mobile communication system, comprising: base station selection means for selecting a first base station that is

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transmitting user data in a downlink signal with a preferred reception quality (Column 5 lines 50 – 67, Column 6 lines 1 – 11), downlink signal weight decision means for determining transmission power of downlink signals from other base stations not selected by said mobile terminal, said other base stations transmitting user data in said downlink signals to the mobile terminal after the identification of the selected first base station is transmitted (Column 6 lines 2 – 7, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504,506) are the base stations that are not selected, said base stations will resume transmitting data symbols in the subsequent data frames, which are the frames after the base station (502) is selected);

Dabak does not teach transmission means for transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal, downlink signal weight decision means for determining transmission power of downlink signals from the selected first base station and the other base stations not selected by said mobile terminal, and a downlink TPC command decision means for using the downlink signals from said other base stations to decide whether transmission power of selected first base station and said other base stations is excessive or insufficient, and to instruct an increase or decrease of said transmission power based on the determined transmission power of the downlink signals from said selected first base station and said other base stations not selected by said mobile terminal by transmitting information from the mobile terminal, wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is

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properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations, wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data, wherein the information sent from the mobile terminal to the selected first base station and the other base stations to modify the transmission power of the downlink signals of the selected first base station and the other base stations is transmitted while the first base station is selected as transmitting user data with the preferred reception quality.

Toskala teaches transmission means for transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal (Column 10 lines 22 – 25), downlink signal weight decision means for determining transmission power of downlink signals from the selected first base station and the other base stations not selected by said mobile terminal (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, the power of the base stations, regardless of the selected state, is measured for the purposes of closed loop power control), and a downlink TPC command decision means for using the downlink signals from said other base stations to decide whether transmission power of selected first base station and said other base stations is excessive or insufficient, and to instruct an increase or

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decrease of said transmission power based on the determined transmission power of the downlink signals from said selected first base station and said other base stations not selected by said mobile terminal by transmitting information from the mobile terminal (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2). Toskala further teaches wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations (Col. 10 lines 22 – 29, See Response To Arguments Above), wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data (Col. 10 lines 22 – 29, See Response To Arguments Above), wherein the information sent from the mobile terminal to the selected first base station and the other base stations to modify the transmission power of the downlink signals of the selected first base station and the other base stations is transmitted while the first base station is selected as transmitting user data with the preferred reception quality (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, the power of the base stations, regardless of the selected state, is controlled via closed loop power control).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the power control method taught by Toskala in the system of Dabak for the purpose of controlling transmission power in SSDT mode as taught by Toskala.

Regarding Claims 25, 27, Dabak in view of Toskala teaches all of the claimed limitations recited in Claims 1, 18. Dabak further teaches wherein said other base stations not selected by the mobile terminal transmit user data to the mobile terminal and transmit pilot data after the identification of the selected first base station is transmitted (Column 6 lines 2 – 7, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504,506) are the base stations that are not selected, said base stations will resume transmitting data symbols in the subsequent data frames, which are the frames after the base station (502) is selected). Toskala further teaches a downlink dedicated physical channel and a downlink dedicated control channel (Column 10 lines 43 – 50). Toskala further teaches wherein said other base stations not selected by the mobile terminal, which do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data (Col. 10 lines 22 – 29, See Response To Arguments Above)

Regarding Claims 29, 30, Dabak in view of Toskala teaches all of the claimed limitations recited in Claims 1, 18. Toskala further teaches wherein the information sent from the mobile terminal to the selected first base station and the other base stations is a transmission power control signal that is determined based on measuring transmission powers of downlink signals from the selected first base station and the

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other base stations together while the first base station is selected, wherein each of the selected first base station and the other base stations adjust respective transmission powers in response to receiving the transmission power control signal (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, the power of the base stations, regardless of the selected state, is controlled via closed loop power control).

4. Claims 2 – 6, 8 – 10, 19 – 24, 26, 28, 31 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dabak (US 6,862,275) in view of Toskala et al. (US 6,650,905) as applied to Claims 1, 18 above, and further in view of Mohebbi (US 6,603,971).

Regarding Claim 2, Dabak in view of Toskala teaches all of the claimed limitations recited in Claim 1. Dabak in view of Toskala does not teach estimating uplink reception quality of said other base stations.

Mohebbi teaches estimating uplink reception quality of base stations (Column 9 lines 12 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the estimation method taught by Mohebbi in the system of Dabak in view of Toskala for the purpose of reducing the backhaul load in the fixed network as taught by Mohebbi.

Regarding Claim 3, Dabak in view of Toskala and in further view of Mohebbi teaches all of the claimed limitations recited in Claim 2. Mohebbi further teaches

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wherein signal weights are determined for the downlink signals from said other base stations based on the uplink reception quality (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station, the ranking is the weighting).

Regarding Claim 4, Dabak in view of Toskala and in further view of Mohebbi teaches all of the claimed limitations recited in Claim 2. Dabak further teaches a base station that is transmitting user data to the mobile terminal after the first base station is selected (Column 6 lines 2 – 5, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504,506) are the base stations that are not selected, said base stations will resume transmitting data symbols in the subsequent data frames, which are the frames after the base station (502) is selected). Toskala further teaches calculating a correlation between an increase or decrease in transmission power instructed by a transmission power control, and an increase or decrease in transmission power of a downlink signal received from a base station wherein said correlation is calculated based on a difference of the increase or decrease of the transmission power instructed and the increase or decrease in the transmission power of the downlink signal received (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, there is a correlation between the transmission power control and the transmission power of the downlink signal because the transmit power control controls the transmission power of the downlink, in a closed loop power control system, such as the one used according to the 3G TS 25.214 v 3.1.1, there will be a difference

between the actual change in transmission power and the TPC step due to the characteristics of the electronic circuits used in said closed loop method).

Regarding Claims 5, 23, Dabak in view of Toskala teaches all of the claimed limitations recited in Claims 1, 18. Toskala further teaches a signal obtained by combining downlink signals from said other base stations is used to determine whether the transmission power of the other base stations is excessive or insufficient (Figure 11, Column 7 lines 66 – 67, Column 8 lines 1 – 32, Column 10 lines 43 – 50).

Dabak in view of Toskala does not teach weighted downlink signals.

Mohebbi teaches weighted downlink signals (Column 6 lines 63 – 67, Column 7 lines 1 – 2, the ranking is the weighting).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the weighting method taught by Mohebbi in the system of Dabak in view of Toskala for the purpose of reducing the backhaul load in the fixed network as taught by Mohebbi.

Regarding Claim 6, Dabak teaches a receiving method for demodulating user data in a downlink signal from base stations to a mobile terminal in a mobile communications system, comprising the steps of: selecting, at the mobile terminal, a first base station, said first base station transmitting user data in a downlink signal having a preferred reception quality (Column 5 lines 50 – 67, Column 6 lines 1 – 11), other base stations transmitting user data after the identification of the selected first base station is transmitted (Column 6 lines 2 – 7, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504,506) are the base stations that are not selected, said base

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stations will resume transmitting data symbols in the subsequent data frames, which are the frames after the base station (502) is selected).

Dabak does not teach transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal and using the downlink signals, from said other base stations not selected by said mobile terminal to demodulate, at the mobile terminal, user data from said selected first base station by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal, wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations, wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data, wherein said step of using comprises determining an estimated uplink reception quality of said other base stations based on measuring, at the mobile terminal, transmission powers of each of the downlink signals from the other base stations, wherein the user data from the selected first base station is demodulated by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not

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selected by said mobile terminal such that the downlink signals from the other base stations are individually weighted based on the estimated uplink reception quality and combined with the downlink signal of the selected first base station while the first base station is selected as transmitting user data having the preferred reception quality.

Toskala teaches transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal (Column 10 lines 22 – 25). Toskala further teaches wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations (Col. 10 lines 22 – 29, See Response To Arguments Above), wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data (Col. 10 lines 22 – 29, See Response To Arguments Above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the base station selection method taught by Toskala in the system of Dabak as an alternative means for informing wireless network entities as to what base station has been selected during SSDT mode as taught by Toskala.

Dabak in view of Toskala does not teach using the downlink signals, from said other base stations not selected by said mobile terminal to demodulate, at the mobile terminal, user data from said selected first base station by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal, wherein said step of using comprises determining an estimated uplink reception quality of said other base stations based on measuring, at the mobile terminal, transmission powers of each of the downlink signals from the other base stations, wherein the user data from the selected first base station is demodulated by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal such that the downlink signals from the other base stations are individually weighted based on the estimated uplink reception quality and combined with the downlink signal of the selected first base station while the first base station is selected as transmitting user data having the preferred reception quality.

Mohebbi teaches demodulating, at the mobile terminal, user data from said selected first base station by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal (Col. 1 lines 44 – 53, in soft handoff the serving base station in the active set is the selected base station, the other base stations in the active set are the other base stations), wherein said step of using comprises determining an estimated uplink reception quality of said other base stations based on measuring, at the mobile terminal, transmission powers of each of the downlink signals from the other base

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stations (Cols. 6 lines 63 – 67, 7 lines 1 – 2), wherein the user data from the selected first base station is demodulated by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal such that the downlink signals from the other base stations are individually weighted based on the estimated uplink reception quality and combined with the downlink signal of the selected first base station while the first base station is selected as transmitting user data having the preferred reception quality (Cols. 1 lines 44 – 53, 6 lines 63 – 67, 7 lines 1 – 2, the ranking is the weighting).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the methods taught above by Mohebbi in the system of Dabak in view of Toskala for the purpose of reducing the backhaul load in the fixed network as taught by Mohebbi.

Regarding Claim 19, Dabak teaches a mobile terminal for receiving user data in the downlink signal from base stations in a mobile communication system, comprising: base station selecting means for selecting, a first base station that is transmitting user data in a downlink signal with a preferred downlink reception quality (Column 5 lines 50 – 67, Column 6 lines 1 – 11), downlink signal weight decision means for determining transmission power of downlink signals from other base stations not selected by said mobile terminal, said other base stations transmitting user data in said downlink signals to the mobile terminal after the identification of the selected first base station is transmitted (Column 6 lines 2 – 7, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504,506) are the base stations that are not selected, said base stations will resume

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transmitting data symbols in the subsequent data frames, which are the frames after the base station (502) is selected);

Dabak does not teach transmission means for transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal and data demodulating means for using downlink signals from said other base stations to demodulate user data from said first base station by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal, wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations, wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data, wherein said data demodulation means determines an estimated uplink reception quality of said other base stations based on measuring, at the mobile terminal, transmission powers of each of the downlink signals from the other base stations, wherein the user data from the selected first base station is demodulated by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said

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mobile terminal such that the downlink signals from the other base stations are individually weighted based on the estimated uplink reception quality and combined with the downlink signal of the selected first base station while the first base station is selected as transmitting user data having the preferred reception quality.

Toskala teaches transmission means for transmitting, from the mobile terminal, identification of the selected first base station to the first base station and other base stations not selected by said mobile terminal (Column 10 lines 22 – 25). Toskala further teaches wherein said other base stations terminate transmission of user data to said mobile terminal if said identification, which is transmitted by said mobile terminals is properly received at the other base stations, and said other base stations continue to transmit user data after said selecting of the first base station if said identification of the selected first base station transmitted by said mobile terminal is not properly received at the other base stations (Col. 10 lines 22 – 29, See Response To Arguments Above), wherein said other base stations transmit user data to said mobile terminal prior to the selecting of said first base station, and said other base stations do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data (Col. 10 lines 22 – 29, See Response To Arguments Above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the base station selection method taught by Toskala in the system of Dabak as an alternative means for informing wireless network entities as to what base station has been selected during SSDT mode as taught by Toskala.

Mohebbi teaches data demodulating means for using downlink signals from said other base stations to demodulate user data from said first base station by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal (Col. 1 lines 44 – 53, in soft handoff the serving base station in the active set is the selected base station, the other base stations in the active set are the other base stations), wherein said data demodulation means determines an estimated uplink reception quality of said other base stations based on measuring, at the mobile terminal, transmission powers of each of the downlink signals from the other base stations (Cols. 6 lines 63 – 67, 7 lines 1 – 2), wherein the user data from the selected first base station is demodulated by combining the downlink signal of the selected first base station and the downlink signals from said other base stations not selected by said mobile terminal such that the downlink signals from the other base stations are individually weighted based on the estimated uplink reception quality and combined with the downlink signal of the selected first base station while the first base station is selected as transmitting user data having the preferred reception quality (Cols. 1 lines 44 – 53, 6 lines 63 – 67, 7 lines 1 – 2, the ranking is the weighting).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the methods taught above by Mohebbi in the system of Dabak in view of Toskala for the purpose of reducing the backhaul load in the fixed network as taught by Mohebbi.

Regarding Claims 8, 31, Dabak in view of Toskala in further view of Mohebbi teaches all of the claimed limitations recited in Claims 6, 19. Mohebbi further teaches wherein signal weights are determined for the downlink signals from said other base stations based on the uplink reception quality (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station, the ranking is the weighting).

Regarding Claims 9, 32, Dabak in view of Toskala in further view of Mohebbi teaches all of the claimed limitations recited in Claims 6, 19. Toskala further teaches calculating an estimated uplink reception quality from correlation between an increase or decrease in transmission power instructed by a transmission power control, and an increase or decrease in transmission power of a downlink signal received from a base station that is transmitting user data to the mobile terminal after the first base station is selected wherein said correlation is calculated based on a difference of the increase or decrease of the transmission power instructed and the increase or decrease in the transmission power of the downlink signal received (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, there is a correlation between the transmission power control and the transmission power of the downlink signal because the transmit power control controls the transmission power of the downlink, in a closed loop power control system, such as the one used according to the 3G TS 25.214 v 3.1.1, there will be a difference between the actual change in transmission power and the TPC step due to the characteristics of the electronic circuits used in said closed loop method)

Regarding Claims 10, 24, Dabak in view of Toskala and in further view of Mohebbi teaches all of the claimed limitations recited in Claims 6, 19. Mohebbi further teaches wherein a signal obtained by combining weighted downlink signals from the other base stations is used for demodulating the user data from said first base station (Col. 1 lines 44 – 53, in soft handoff the serving base station in the active set is the selected base station, the other base stations in the active set are the other base stations).

Regarding Claim 20, Dabak in view of Toskala teaches all of the claimed limitations recited in Claims 18. Dabak in view of Toskala does not teach determining estimated uplink reception quality of said other base stations.

Mohebbi teaches determining estimated uplink reception quality of base stations (Column 9 lines 12 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the estimation method taught by Mohebbi in the system of Dabak in view of Toskala for the purpose of reducing the backhaul load in the fixed network as taught by Mohebbi.

Regarding Claims 21, Dabak in view of Toskala and in further view of Mohebbi teaches all of the claimed limitations recited in Claim 20. Mohebbi further teaches wherein signal weights are determined for the downlink signals from said other base stations based on the uplink reception quality (Column 6 lines 63 – 67, Column 7 lines 1 – 2, Column 9 lines 12 – 15, the base station that experiences the best uplink reception quality can be the highest ranked base station, the ranking is the weighting).

Regarding Claims 22, Dabak in view of Toskala and in further view of Mohebbi teaches all of the claimed limitations recited in Claim 20. Toskala further teaches calculating a correlation between an increase or decrease in transmission power instructed by a transmission power control, and an increase or decrease in transmission power of a downlink signal received from a base station that is transmitting user data to the mobile terminal after the first base station is selected wherein said correlation is calculated based on a difference of the increase or decrease of the transmission power instructed and the increase or decrease in the transmission power of the downlink signal received (Column 10 lines 30 – 38, lines 43 – 50, See also Document 3G TS 25.214 v 3.1.1 Sections 5.2.1.1 and 5.2.1.2, there is a correlation between the transmission power control and the transmission power of the downlink signal because the transmit power control controls the transmission power of the downlink, in a closed loop power control system, such as the one used according to the 3G TS 25.214 v 3.1.1, there will be a difference between the actual change in transmission power and the TPC step due to the characteristics of the electronic circuits used in said closed loop method)

Regarding Claims 26, 28, Dabak in view of Toskala and in further view of Mohebbi teaches all of the claimed limitations recited in Claims 6, 19. Dabak further teaches wherein said other base stations not selected by the mobile terminal transmit user data to the mobile terminal and transmit pilot data after the identification of the selected first base station is transmitted (Column 6 lines 2 – 7, lines 64 – 67, Column 7 lines 1 – 4, the base stations (504,506) are the base stations that are not selected, said

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base stations will resume transmitting data symbols in the subsequent data frames, which are the frames after the base station (502) is selected). Toskala further teaches a downlink dedicated physical channel and a downlink dedicated control channel (Column 10 lines 43 – 50). Toskala further teaches wherein said other base stations not selected by the mobile terminal, which do not properly receive said identification of the selected first base station and continue to transmit without terminating transmission of user data (Col. 10 lines 22 – 29, See Response To Arguments Above).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S. Dean whose telephone number is 571-272-7877. The examiner can normally be reached on Monday-Friday 6:00-2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on 571-272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Raymond S. Dean
January 14, 2007

